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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/758,010

01/16/2004

Seong-Do Han

0630-1937P

5768

2292

7590

12/21/2004

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EXAMINER

IP, SHIK LUEN PAUL

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 12/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,010

Applicant(s)

HAN ET AL.

Examiner

Paul Ip

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 14-17 is/are allowed.
- 6) ☒ Claim(s) 1-4, 8 and 10-13 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 8, and 10-13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sugita et al (5,861,697), or Hamatani (5,789,897), or Strachan (3,737,752).

Claims 1-4, 8, and 10-13 have been carefully considered. With respect to the respective elements, the patent to Sugita et al discloses an induction motor comprising a main winding 2, an auxiliary winding 3, a run capacitor 4 or 6), a starting capacitor 7, and a PTC thermistor 8 connected the same as recited in the claims. See figure 1.

With respect to claims 1-4, 8, and 10-13 for the respective elements, the patent to Hamatani discloses an induction motor control system comprising a main winding 3, an auxiliary winding 2, a run capacitor 8, a starting capacitor 7, and a PTCD thermistor 4 connected the same as recited in the claims. See figures 5 and 6.

With respect to claims 1-4, 8, and 10-13, the patent to Strachan discloses an induction motor control system comprising a main winding 12, an auxiliary winding 10, a run capacitor 18, a starting capacitor 26, and a PTC thermistor 20 connected the same as recited in the claims. See figure 2.

Allowable Subject Matter

4. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The references of the record fail to teach or suggest a first main winding and a second main winding where the NTC is connected to one end of the second main winding and the PTC is connected between a connection point of the first and second main windings.

5. Claims 9 and 14-17 are allowed for the same reason as set forth in the previous paragraph.

Citation of Pertinent References

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patent to Pfarrer et al (4,066,937) shows a main WDG, auxiliary High Speed ST. WDG and Low Speed ST. WDG, run capacitors, starting capacitors, and NTC 60.

The patent to Fry (4,384,312) shows main windings 11, 13 and 19, and protectors 59 and 65.

The patent to Nacewicz et al (5,212,436) shows a main winding 10, an auxiliary winding 12, PTC 16, and NTC 26.

The patents to Denny (3,967,172), Theis (5,192,887), Zigler (4,387,330), Ehrens et al (3,725,757), and Vind (4,272,714) disclose induction motor control circuits comprising a main winding, an auxiliary winding, a run capacitor, and a starting capacitor with a protection device.

Communication Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Ip whose telephone number is (571)-272-1941. The examiner can normally be reached on Monday to Friday from 6:30 a.m. to 3:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin, can be reached on (571)-272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Paul Ip", with a stylized flourish at the end.

Paul Ip
Primary Examiner
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